

BRIEFING PAPER

Allied Paper Operable Unit, Kalamazoo River Superfund Site

Issue or Request

Cleanup decision with intense public interest.

Background

The Allied Landfill is an Operable Unit (OU1) of the Kalamazoo River Superfund Site.

OU1 is an approximately 89-acre parcel located within the City of Kalamazoo (City) and is situated along Portage Creek. The site is depicted on Figure 1-2. The United States Environmental Protection Agency (USEPA) has recently interacted with City officials regarding their Proposed Plan and communicated it intends to select a consolidation and capping remedy for OU1. An Alternatives Summary table of the various remedial options, and costs presented in the USEPA Draft Feasibility Study is attached.

The City is strongly opposed to the USEPA's Proposed Plan, and is garnering local and national support in order to pressure the USEPA to select a remedy that results in complete removal of the legacy wastes from paper-making mill operations that include 1.5 million cubic yards of polychlorinated biphenyl (PCB) residual wastes. The City has indicated they intend to contact the Michigan Department of Environmental Quality (MDEQ) so that the MDEQ can explain or justify its support of the Proposed Plan. The City has advised MDEQ staff and has indicated in recent news articles that they are contacting legislators at the state and federal level to solicit their support in opposing the Proposed Plan. The City also intends to evaluate legal avenues for their opposition.

OU1 is one of four land-based operable units on the Kalamazoo River. The other operable units (King Highway Landfill [OU3], a state lead site; Willow Boulevard/A-site Landfills [OU2], a federal lead site; and 12th Street Landfill [OU4], also a federal lead site) have all been closed in accordance with the remedy selection process under Superfund as consolidation and capping remedies. King Highway Landfill has been consolidated and capped the longest of any of the operable units, since 2000; an extensive data set of quarterly groundwater monitoring has not demonstrated any groundwater impacts above health-based risks being realized from this in-place closure remedy.

Analysis

Management and technical staffs of the MDEQ are in support of the USEPA's Proposed Plan for consolidation and capping. It is understood that the site, as it exists, poses risks. Those risks can be reasonably managed with an in-place closure remedy. It is acknowledged that groundwater is impacted by PCBs and metals. Threats posed by the landfill to the groundwater should be addressed by successful implementation of the consolidation and capping remedy. The main threat from contaminated groundwater that exists is to Portage Creek. The consolidation and capping remedy should mitigate the threat to the creek. One of the City's public water supply wells (which is also within an approved Wellhead Protection Zone) is just down-gradient of OU1. That well is not impacted by site-related contaminants, even though the uncapped PCB-containing

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residuals have been at this location since the 1950s. There is no evidence to suggest that groundwater flow patterns will change or that PCBs will suddenly become more amenable to groundwater transport following implementation of the remedy that would newly jeopardize the City's public well within the Wellhead Protection Zone. The issue of groundwater and how the MDEQ should view this landfill site in relation to the City's Wellhead Protection Zone has undergone technical review by staffs from both the Remediation and Redevelopment Division and the current Water Resources Division (WRD). However, many of the technical and management staffs from the WRD have since retired. During that phase of extensive reviews between these divisions, however, a letter was executed by Deputy Director Jim Sygo to the USEPA explaining the department's position with respect to groundwater. That letter is appended to this briefing.

Issues

The following are some of the issues that the City is likely to raise.

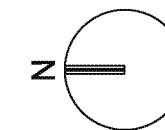
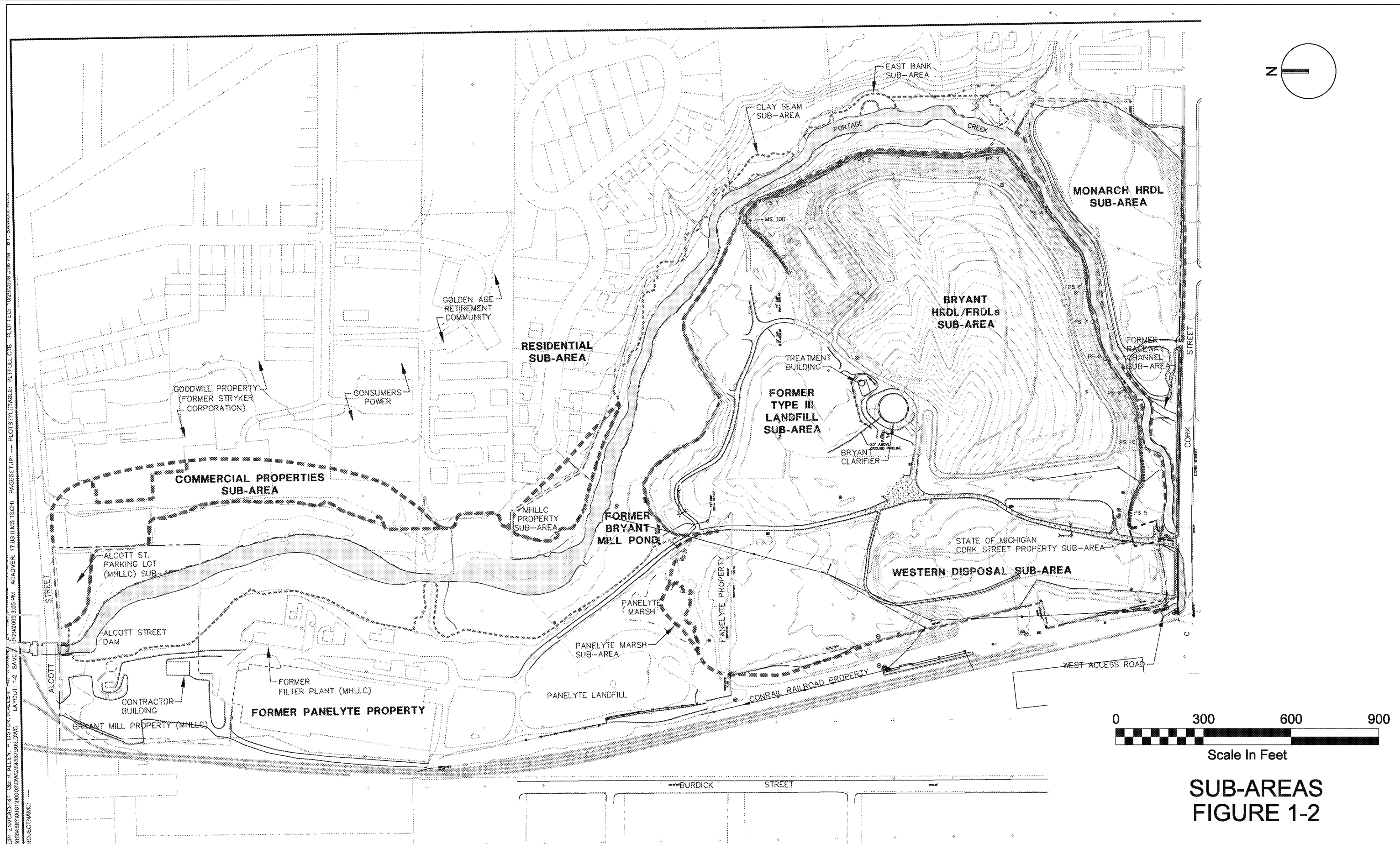
- 1) OU1 is different than other OUs because it is located within a neighborhood.
- 2) OU1 is located within the City's Wellhead Protection Zone, and the landfill is an unacceptable threat to the public water supply.

Recommendation

The Superfund Section recommends that the MDEQ initiate frequent interactions at the technical and mid-management levels at the USEPA to begin preparing for the reactions this federal decision will have on an important community in Michigan. It is vital that the MDEQ maintains its role as the support agency. MDEQ's upper management needs to decide now if there are any hesitations or concerns with the Remediation and Redevelopment Division's decision to fully support the USEPA's Proposed Plan, so that either questions can be addressed now to change the MDEQ's direction, or begin the very necessary work to interface with the USEPA at the appropriate level, to share in advance any discordance, so it can be addressed. Further, work should begin now on establishing media contacts for what should be a summer filled with frequent requests for reactions and input from the MDEQ on this high profile issue.

Prepared by: Paul Bucholtz, Project Manager
Site Assessment and Site Management Unit
Superfund Section
Remediation and Redevelopment Division
Michigan Department of Environmental Quality
April 25, 2013

Attachments



**SUB-AREAS
FIGURE 1-2**

ALLIED PAPER, INC. / PORTAGE CREEK /
KALAMAZOO RIVER SUPERFUND SITE
ALLIED PAER, INC. OU

Allied Landfill Operable Unit (OU1) Alternatives Summary		
Alternative	Description	Cost
1	No action	\$54,000.00
2	Consolidation and capping	
2A	Construct caps on both Monarch and Operations areas	\$40 million
2B	Consolidate Monarch within Operations areas	\$39 million
2C	Consolidate Monarch within operations areas and transport excavated soils with PCBs >500 mg/kg offsite for incineration	\$60 million
Subalternative (i)	Groundwater collection and treatment system	\$3.0 million (2A) or \$2.9 million (2B and 2C)
Subalternative (ii)	Groundwater collection and treatment system with slurry wall	\$12 million (2A) or \$10 million (2B and 2C)
3	Total Removal and Offsite Disposal	\$366 million
4	Encapsulation Containment System	\$134 million



STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

REBECCA A. HUMPHRIES
DIRECTOR

April 16, 2010

Mr. Richard Karl
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Mail Code: SE-5J
Chicago, Illinois 60604-3507

Dear Mr. Karl:

SUBJECT: Kalamazoo River Superfund Site – Allied Paper Operable Unit
Draft Supplemental Groundwater Investigation Report
October 2009

The Michigan Department of Natural Resources and Environment (DNRE) has concluded its review of the Supplemental Groundwater Investigation Report (report) dated October 2009 and received in December 2009 as an appendix to the draft Feasibility Study (FS), authored by Arcadis on behalf of Millennium Holdings, LLC. This report is the result of recommendations made to address questions regarding groundwater that may be emanating from the Allied Paper Operable Unit of the Kalamazoo River Superfund Site. The comments below represent input from the DNRE's Remediation and Redevelopment Division and its Water Bureau.

The objective of the report was to address the City of Kalamazoo's concern "that constituents present in the shallow groundwater at the Allied OU [Operable Unit] could impact the City's Central Well Field via groundwater migration." Further, that "should there be a direct flow path for groundwater from the Allied OU to the City's Central Well Field, the public water supply might be affected by these inorganic constituents [iron, manganese, and arsenic]. In general, the DNRE concurs with the following conclusions that resulted from the work conducted in June and July 2009 and that are provided in the report:

- "Portage Creek appears to be the primary influence on the configuration of the water table surface within the OU. In the main disposal area of the Allied OU, shallow groundwater discharges radially to Portage Creek."
- "...shallow groundwater is influenced, although not completely captured, by the creek."
- "Due to the upward pressure exerted by the groundwater present in the regional aquifer, the downward flow of groundwater from the surficial aquifer monitored at the Allied OU to the deeper regional aquifer is highly improbable."
- Various "...data [collected over time] illustrate hydraulic disconnection between the surficial aquifer unit and the regional aquifer unit."

Mr. Richard Karl

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However, one of the recommended investigation issues concerning inorganic constituents was not directly addressed by the investigation. Instead, the report concludes the following:

- “The results of the analysis of groundwater flow patterns, directions and gradients clearly support the RI [Remedial Investigation] Report conclusion that shallow groundwater at the Allied OU discharges to Portage Creek, and no additional data were obtained that suggest that there is a pathway to the regional aquifer used for the City Central Well Field. With this understanding, no further analysis was deemed necessary with respect to the distribution of inorganic constituents in onsite or offsite groundwater.”

There are good reasons, as discussed by Arcadis in the report, why actual data were not collected in regard to inorganics for this recent investigative phase. Other sources in the area may have contributed to inorganic contamination and would confound interpreting data beyond the Allied site boundaries as it relates to drawing direct connections back to the Allied site.

Nonetheless, we believe it is important to note that, based on our technical review, the number and location of the wells that were evaluated for this report appear inadequate to rule out, to the degree of certainty that is implied in the report, the possibility that inorganic contaminants may have migrated beyond the influence of Portage Creek or that there be a component of groundwater flow to the northwest from the site toward the City's Central Well Field. The DNRE agrees that the additional information collected supports an already existing understanding of groundwater flow paths at the site. While we do not agree that all uncertainty has been addressed, we acknowledge that it is not feasible or necessary to eliminate all uncertainties when assessing groundwater conditions at contaminated sites.

The DNRE recommends the following course of action in response to groundwater questions that this latest investigation was intended to address. It is the DNRE's position that sufficient information exists to allow the United States Environmental Protection Agency (U.S. EPA) to make an informed remedial decision for the site. All information collected to date supports the main conclusion of the RI that the discharge of Portage Creek into the lower elevation of the Kalamazoo River is having an overwhelming influence on groundwater flow at and emanating from the site. In our view, any remaining uncertainty about groundwater conditions at the Allied Paper Operable Unit is not inconsistent with the level of uncertainty we commonly face in addressing similar sites. Our recommendation that sufficient information exists to make a remedial decision is based upon a degree of rigor in site characterization that is comparable to or greater than what is available for remedial decision making at sites where similar threats are being evaluated. The DNRE acknowledges the importance of this question due to the proximity of this disposal unit to a regional drinking water resource. It is for this reason the DNRE recommends that the FS plan for and cost out a long-term monitoring program that monitors groundwater trends over time. An enhanced network installation to the north and west will help to identify where possible institutional controls may be needed, serve to confirm over time that the conceptual site model is accurate, and demonstrate that the remedy remains protective. The monitoring network for any remedial options that include closure in place must be capable of assessing groundwater impacted by and possibly leaving the Allied site at multiple depths for multiple parameters, including inorganics.

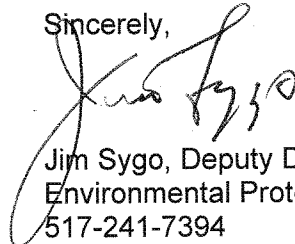
Mr. Richard Karl

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April 16, 2010

Thank you for the opportunity to comment and for your consideration of the DNRE's recommendations. Please let me know if you have any questions in regard to the information or recommendations included in this letter, or please feel free to contact Mr. Paul Bucholtz, Superfund Section, in the Remediation and Redevelopment Division, at 517-373-8174.

Sincerely,



Jim Sygo, Deputy Director
Environmental Protection
517-241-7394

cc: Ms. Rebecca Frey, U.S. EPA
Mr. Timothy Prendiville, U. S. EPA
Mr. James Saric, U.S. EPA
Mr. Michael Berkoff, U.S. EPA
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Mr. Scott Ross, DNRE
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